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The Use of Tests in the High School

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IF THIS article had been written twenty years ago it would have emphasized testing to measure achievement in the various high school subjects, and that would have been a reasonable treatment of the topic at that time. The purpose of the school was largely to give children certain skills and knowledges which were the outcomes of specific courses. One who wished to see how well the program was functioning or how well an individual was achieving would have been able to give standardized tests and to have answered his questions, within the degree of reliability and validity of the tests which were then available. The chief use of tests two decades ago was to measure academic achievement and this was consonant with the philosophy of education which permeated the high schools at that time.

The changing concept of the functions of the secondary school is resulting in a changing concept of the uses of tests. The measurement of achievement in the various subjects is not now thought of as an adequate evaluation of the total growth of a child or of the success of the high school program. High school teachers are still concerned with the acquisition of basic skills and knowledges of their pupils but they are also concerned with the emotional, physical, and social development of these youths. The publications of the Educational Policies Commission have emphasized the educational objectives of self-realization, human relationships, economic efficiency, and civic responsibility. The imperative needs of youth have been carefully studied and catalogued. The modern high school is making a serious effort to translate these objectives into classroom practice and is continuously evaluating its program with these objectives in mind. Tests, both standardized and teacher-

made, play an increasingly larger role in the high school. The broadening concept of the functions of the high school has made necessary the development of newer techniques of evaluation, and has brought into focus new uses of tests.

Several thousand standardized tests and scales have been developed for use in the schools. High school tests may be classified roughly into four types, according to the uses which are made of them. These are prognostic, achievement, diagnostic, and adjustment measures.

The prognostic tests help teachers to make predictions concerning children's educational achievements, vocational successes, and personal and social adjustments. Tests are a more scientific substitute for the early types of prognosis which bordered on fortune telling. Teachers have always made predictions that certain children will be successful in life, or that others will never be able to finish college successfully, or that others should or should not enter certain professional fields of study. Most of these predictions were based upon observation and a limited amount of data. Promotion and failure in school really meant that the teacher predicted that children would be successful or unsuccessful in the next grade. Tests, when combined with other techniques of gathering information about children, afford data which make possible a more scientific prediction. The school that purports to meet the needs of children must have all of the information it can possibly gather about each child. Guidance and counseling may take on real meaning when the teacher is fortified with facts and is not relying on guess work and observation alone.

Prognostic tests include those which give information about a child's physical and mental abilities, general scholarship, aptitude for certain curriculum areas, and interests.

Achievement tests indicate the extent to which a child or groups of children have achieved in particular areas of the curriculum. They are usually of the general survey type and show how well a child, or a class, or a school, or all of the schools in an administrative unit have achieved in relation to some established normative values. In some places achievement tests have been used by administrators to evaluate the work of teachers. This is not the chief purpose of these tests. There are many factors other than teaching which influence the scores made on tests. Among these are the

previous educational experiences of the children, their social and cultural backgrounds, their abilities, interests and motivation. Test results of a class would afford an inadequate measure of teaching.

Achievement tests are helpful in determining the extent to which a school is accomplishing its stated objectives. Excellent tests are now available to show how well a child reads in the different content areas, the extent of his vocabulary, his ability to write the English language, and his understandings and skills in math, science, and social studies. When achievement tests are combined with prognostic test results, it is possible for the teacher to know whether the child is achieving as well as should be expected or whether he should be encouraged to higher levels of performance. Measurements of achievement may be most useful in determining improvements needed in the curriculum, sequence of experiences, and selection of teaching materials.

Diagnostic tests are designed to show the nature of accomplishment or disability in some particular area of skill learning. They are usually administered to individuals or small groups of pupils who have shown some disabilities in certain skill areas. They indicate the nature of the child's disability and therefore project the learning experiences which should be planned for him. For example, a diagnostic test in reading would indicate, among other things, the ability of a child to recognize the basic sight words, his command of the techniques of word identification, his comprehension of what he reads, vocabulary, speed of reading, and ability to organize, remember, and use what he reads. If certain deficiencies were discovered, the teacher would then know what types of instruction the child needed to become a proficient reader. A diagnostic test in math would tell whether a child's difficulties resulted from inability to handle the fundamental functions, inability to read the problem well, inability to plan and organize his work, or from carelessness. The achievement test would show the level of accomplishment; the diagnostic test would show the nature of his difficulties within a skill area.

Adjustment measures represent the most recent development in testing at the high school level. Since the secondary school has accepted the personal and social adjustment of the child as one of its functions, it has been necessary to devise techniques which would be useful in this area. Many schools now use tests, rating scales,

and check lists which reveal the types of adjustment problems children have. The school needs to know the extent to which a child is adjusted socially; it needs to know what kinds of attitudes he has acquired. It needs to explore the interests, fears, and ambitions of its pupils. Information of this type is a necessity for the teacher who attempts to meet the personal and social needs of those she teaches.

The discussion above indicates that a good testing program at the secondary level may be of great help to the teachers in evaluating the instructional program, in planning curriculum improvement, and in knowing more about the children whose needs they attempt to meet. One further point should be made. Information gained from testing may be very useful to the child himself in aiding him to understand himself better. A child may be aided greatly in his own adjustments if he knows something about his general ability level, his strengths, his weaknesses, and his problem areas. High school children should welcome information of this kind and should be taught how to use such information in establishing goals for themselves and in turning weaknesses into strengths whenever that is possible. Thus, the administration of tests would not be something which is "done to the child." The child would be cooperating with the school in learning more about himself so that he could attain maximum growth and adjustment. The test administrator would not find children sullen and fearful of test results but eager to participate in whatever types of inventory the school planned to use.

The number of tests is large, the uses of tests are complicated, and the cost of tests is great. Principals and teachers should work together to determine what kinds of information they should have about their students, and how such information could be used. Then, tests could be selected which would provide the information which the school expects to use. The administration of tests which furnish data which are ignored is a waste of time, money, and energy. A teacher in a school which has accepted the broader functions of education would need all possible information about the children as a group and about each individual. With this information good teaching may result; without this information excellent teaching is impossible.

Techniques the Teacher May Use in Constructing Tests

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ALMOST anyone can and does criticize the tests teachers make, especially those who have to take them, but few critics make constructive suggestions beyond that of the sharp curtailment or complete abandonment of such instruments. This latter thought has merit but overlooks the constitutional procrastination that so often is a characteristic of unmotivated children and their elders, too. From remarks overheard on the campuses of teachers colleges and schools of education during summer sessions one gets the impression that teachers themselves do not approve highly of the tests which they are required to take. This should be a direct lesson to them to go back to their classrooms and do differently; however, the multiplicity of duties which faces the average teacher often results only in those things being done which will enable him to get through the day somehow. Tests can wait until needed and often do, so that when the harried instructor writes a quiz, the resultant test may be superficial as to content and haphazard as to method.

How can the teacher do as well in writing examinations as his professional training and experience have qualified him to do? Obviously he cannot consistently succeed in preparing good instruments unless he uses a system which insures that for every class adequate attention is focused upon those points which have been studied. Too, the test as a whole and the items of which it is comprised must conform to the principle that a good test is a teaching device. Further, the evaluation ought to include choices which afford the teacher an opportunity to check class and individual achievement of a quantitative kind, personal comprehension of a more qualitative order, and diagnostic information as a guide to future study planning.

Before going into the proposed system for making more efficient and effective tests, it might be well to consider the types of examina-

tions which secondary teachers are likely to use. In general, current practice seems to lean heavily toward the more objective or brief response type of question. Completion, multiple choice, true and false, matching, and rearranging items are examples of this sort. The so-called subjective or the essay type of question is the only other major kind of examination commonly in use, though recent research has cast doubt on how common its use is. More than one college freshman has registered astonishment when expected to take an essay examination in his history class; his emotions are roiled when he is asked to respond in a medium unfamiliar to him. Despite the use of the essay examination by some professors, classes in measurement methods are largely given over to building bigger and better objective type tests. Combine this factor with the greater ease of administration of the short answer test and part of the answer to the practicing teacher's choice of types of tests will be found.

Regardless of the type of test which the teacher wishes to construct, basic to evaluation in the secondary school classes are certain fundamental principles of pedagogy and human relations:

1. Good tests will be an integral part of the class work. They will be devised to help consolidate learning gains and to aid in determining areas which require more exploration and development.

2. Good tests will become an orderly part of the students' school life. Neither too much stress nor too little should be placed on them. There are an amazing number of adults who still tremble at the thought of taking a test. There is no reason why a test cannot be considered in the nature of a regular checkup, a healthy and a worthwhile yardstick to see how well one is doing, especially in relation to his past achievement. Unreasonable emphasis on one big examination, or unfavorable comparison with the ratings of other students, and deliberate thrusting of students into a state of anxiety as a motivating stimulus are unfortunate aspects of testing which can be found in many classrooms.

3. Good tests will be a positive force in the students' lives. That is, teacher and students will see in a test something beyond the single unit being evaluated; it should have a quality of relating the present to its inheritance from the past and should give some indication of the future. Insofar as possible good tests should tend to unify the students' learning.

4. Good tests will be given in a healthy atmosphere. This means that students will know when a test is to be given, what material they are to be responsible for, and the kind or form of a test which they may expect. The teacher should be most explicit when giving directions; if the test is a multigraphed product, the directions should precede the questions. It is assumed that in a modern class the students will understand why there is an examination and that they will be in accord with taking it.

There are classes in which unannounced quizzes seem in order, but the fair teacher will make sure that his students understand why he considers the "snap" quizzes justified. In a somewhat similar connection there are certain days in the school year when common sense dictates that tests are out of order.

Under principle four there should be some comment on the problem of cheating, which seems move prevalent under testing conditions. For instance, while the short response types of questions make it possible to cover more material and are simpler to mark they also make it easier for the ingenious and ingenuous student to crib from his neighbor or to write potential answers on cards which he hides from teacher's view, or thinks that he does. The teacher who has an actively participating learning group which understands what they as a group and as individuals are doing will not have much cheating. In this, as in many cases, dishonesty is a method of procedure which ought to be replaced by a more constructive habit. Changing the student's attitude toward his work will add incentive to changing the manner in which he does it.

In order to achieve some or all of the high aims delineated in the foregoing paragraphs, the writer, who has no unnecessary illusions about teaching, recommends the following techniques:

1. Strangely enough, the first order of business is to get the materials which pass over and land on your desk separated into groups which bear at least a nodding acquaintance. This is not to be done by jamming overflow papers into drawers which were once empty, but now resemble a Washington (D. C.) file.

2. Now, inside your desk, what goes on there? Or, if you are lucky enough to have a filing cabinet in your room, do you use it for something besides caching your lunch or drying out your galoshes?

Clearly marked manila folders or similarly marked large en-

velopes can help you with the problem of what to do with all the matters you deal with. They can be used to classify lesson plans for each class, units of study, special materials, and student papers. Since you are not likely to have the assistance of a secretary, you will have to do this yourself and continue to do it yourself. This is very important for the success of a good testing program depends on the keeping of adequate and easily available class instruction materials, properly organized and separated for efficient handling.

Add to those items mentioned above collateral reading outlines and the summaries of projects. Student contributions in some classes are of sufficient value to everyone in the group that they should also be placed in separate folders but filed with the appropriate material to which they are related. Probably from a test making viewpoint, your most valuable folder will be the one in which you place the actual substance, notes from the textbook or the gist of the course of study, of the material covered by the students. This may be filed in the calendar period to be covered by the test, or more logically, in the unit or section area studied.

Some teachers do not bother to make notes on texts which they use, but refer directly to the book. This is a questionable procedure, if for no other reason than that it encourages the student to try to memorize his text instead of getting it down in an outline of his own making. But it also makes it more difficult to formulate questions or statements free from textbook taint, or the sound of the author's words. This is not a picayunish point, made for the sake of quibbling, but fundamental to one's philosophy of education. Will the learner be encouraged to develop through the use and understanding of material which has the imprint of the user's personality, or will he be pressured into parroting rote lines from an impersonal textbook? The kind of test which the student learns to expect from his teacher will usually determine how he prepares his lessons.

3. As indicated in point two above, it is strongly suggested that you make detailed notes, in your own language, based on the text or course of study which you are following. Such action is simple in English literature and composition, geography, history, other social studies, general science, biology, chemistry, and physics. It may not seem so reasonable in industrial arts, physical education, health, Latin, French, typing, short hand, home economics, music,

art, and mathematics. Yet, many aspects of this second category lend themselves to carefully built outlines which are especially adapted to the community in which they are to be used. The writer knows of one industrial arts teacher who painstakingly built the substance of his own course of study. No, a big book company did not insist on publishing his outline, though later an industrial county in Michigan did put it out in mimeographed form but a school superintendent saw his work and employed him at a considerable increase in salary in a position which advanced him professionally. It must be obvious that there are interesting and valuable points brought out in every subject-matter field which are overlooked later by the teacher unless he has kept a record of the substance and of the activity in his classes.

4. With all this material now readily available, how can one keep on top of the problem of test-making for classroom use? Here are several possibilities:

a. Get a supply of three-by-five cards.

b. Set up either envelopes to fit into your subject matter folders or make special folders for test questions.

c. Decide what kinds of questions you will wish to employ in testing. Subject matter will often determine the form or forms which seem most consistent with the material being studied. An English teacher may profitably make out essay, true and false, multiple choice, completion, and matching questions and items.

d. Begin to make out different types of questions with the first day of school. Make sure that at least one question with appropriate responses has been put in each folder every day.

e. At regular intervals review the questions which have accumulated in the folders. It is occasionally helpful to try them out on a colleague; his criticism will be a step in the direction of establishing their reliability and validity. The questions should be clear enough that provided that the student has some knowledge of the subject, his responses will be consistent if retested.

f. As most teachers have discovered, it looks easy to write questions, but is not. Over a period of time ambiguities show up which were not at first apparent. Hastily made tests abound

in such confusing items that the student finds himself perplexed instead of taught. If, after the passage of a week's time, you the teacher cannot instantly give the correct response to one of your test items, then the question or statement probably is not a good one.

g. With essay questions reasonable objectivity can be obtained if you will make a list of the points which are expected in the response. Definite credit points should be set up in a full-length essay examination for logical development and choice of language. While this may be deemed quite subjective it seems professional to insist that a teacher understand logical sequences and good language usage. On the opposite count, demerits should be established for illogical approaches, ungrammatical forms, misspelling, and lack of legibility and neatness. Using a fixed set of values as suggested above, the writer experimented for two years with fifteen classes in educational psychology. Half of the time the classes were given objective-types tests, the other half they took essay examinations. Comparisons of the scores earned by individual students showed that striking similarity existed between the two types; often scores would be identical.

In summary it may be noted that teachers have trouble making good tests because their duties are so many and so complex that they do not have time to do justice to the development of tests for their classroom work. This article has endeavored to suggest ways and means by which a system can be set up which will make the writing of test questions a regular part of the day's activities, so that no undue effort has to be expended at one time. If followed faithfully, this plan will provide an efficient means by which the teacher can select a balanced assortment of questions and statements covering the work to be tested. If clerical help is available, the cards have only to be turned over to the stenographer to cut the stencil; if no help is forthcoming, the teacher's task of writing it out himself will be minimized, since he has only to organize the cards. The only weakness which the writer has found in this plan lies within himself; he hopes that other teachers will have sufficient will power to maintain their files and keep the stack of questions growing.

Planning a Program of Standardized Testing

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GIVE standardized tests? Yes, *when*

—they will be administered in time to allow for use of the results during the school year in which they are given,

—teachers will be given sufficient training in their administration to result in their being truly *standardized* tests,

—teachers can be given help in understanding what the scores mean,

—related data as to physical, environmental and emotional status is or will be available to permit intelligent interpretation of the test scores, and

—when the school program is flexible enough to permit readjustment of a pupil's curriculum based on strengths and weaknesses revealed by interpretation of the tests.

TIMING

Ideally, standardized testing in many of the purely achievement areas (reading, spelling, English, mathematics, etc.) is done two or more times during the school year. Tests of capacity (intelligence, aptitude), interest and emotional factors are usually given twice during the total high school period.

In the event funds limit achievement testing to once a year, tests given as near the beginning of the school year as possible provide maximum value for test dollars and effort expended. Tests given at year's end are of little if any use in guiding the student that year. By next year, results may not be valid by reason of a change for better or worse in his physical status, environment or emotional status (feelings about himself and his environment).

The argument that standardized tests of achievement should be saved for the year's end as an indication of whether or not to promote is no longer defensible. Fortunately, decision to promote or retain is presently grounded on the more solid four-fold considera-

tion of intellectual, physical, environmental and emotional status as well as present educational achievement. Another hazard in year-end testing is that it may lead to the stultifying practice of "teaching the test" in order that pupils (and consequently their teachers, some think) may "look good" to administrators.

Intelligence testing is most valuable when it yields more than a single I.Q. or mental age score. While this is useful in estimating certain over-all educational potentials, a knowledge of the strengths of the various aptitudes which go to make up the total picture is a tool of even greater usefulness. Obtained early enough in the high school years, it forms the basis for adjusting the curriculum to the needs of the student. A battery of tests measuring the various aptitudes or facets of intelligence may well be given in the eighth grade with a repeat testing on an alternate form in the tenth grade. Time required in giving such a battery may run up to four or five hours instead of the usual thirty or forty minutes for the single-score, spiral omnibus type test. However, in addition to yielding a many-sided view of the student, the teaching value inherent in the multi-factor test is itself worth the additional class time.

The evaluation of reading achievement constitutes a unique set of problems. It requires special consideration because it is so often found to be lower than capacity and because it is so responsive to training and to both positive and negative factors in the student's mental health picture. Too, since reading is required in 80% to 90% of the average day's school work, poor reading tends to have a widespread negative effect on total school success. For these reasons, a continuous check of the student's various reading skills is desirable if not mandatory. Makers of the better diagnostic reading tests provide as many as five to seven alternate forms of the same test so that progress in mastering the same skills may be measured continually for three or four years, twice a year. A test at the year's beginning to show both pupil and teacher the skills in need of special attention, with a re-test near the year's end by which to measure progress, constitutes a basic minimum. If these are complemented with less formal materials and teacher-devised tests, such a program should prove adequate.

In any testing program there will be a need for "unscheduled" testing. Absentees during regular sessions should be provided an opportunity to complete their programs. Certain test scores will be felt by teachers and counselors to be invalid or an unreliable indi-

cation of the student's real abilities. In such cases, he should be given an alternate form of the test individually or in a small group. Some cases will need referral for a more thorough evaluation to the guidance counselor, reading specialist, school psychologist or community psychological clinic.

ADMINISTRATION OF STANDARDIZED TESTS

There are those who say that standardized group tests should be given only by test experts or certain specified teachers in each school. Others say the classroom teacher should give them. Still others would have tests of intelligence or aptitudes given by special teachers with achievement tests being given by the regular classroom teacher. There are good arguments for each point of view. Certainly, the last two seem the most practical for most schools.

Regardless of who gives the tests, the prime requisite is that they shall be administered in a *standardized* manner. Unless directions are read exactly as they are in the manual of instructions and demonstrations performed precisely as they have been when given to the hundreds or thousands of children on whom the test was standardized, it loses the very quality for which we pay when we buy standardized tests.

From this may be inferred the need for thorough training on the part of whoever will administer a test. Such training involves (1) a reading of the manual of instructions sufficiently to be able to sit down and take the test personally (regardless of the level of the test), (2) scoring one's own test according to the manual, (3) administering the test to another individual and scoring it, and (4) a thorough review of the whole test rationale, procedure and scoring with an attempt at interpretation. The individual thus prepared is then ready to administer that particular test to a classroom group. After steps (1) and (2) have been completed, it has been found helpful to have small group meetings with such resource people as guidance counselors, school psychologists or reading specialists for discussing and clarifying points on procedure, scoring, etc.

Time for this important step in acquiring the skills necessary to give a particular standardized test should be planned in any program where new test are being introduced. Even in long-established testing programs, it has been found that some teachers have been giving tests for years without adhering strictly to instructions. Ask-

ing that teachers plan time to take steps (1) through (4) (above) would constitute a "refresher" to the end that money and time spent for testing produce maximum returns.

Understanding Test Scores

Three concepts are basic to understanding how scores from a battery of tests can be valuable. First, the concept of *intra*-personal differences; how the individual student's aptitudes and abilities vary within himself; his own strengths and weaknesses. Second, the concept of *inter*-personal differences; how individuals compare with each other on each aptitude and ability. Thirdly, the implication of a set of reasons for the occurrence of differences and likenesses.

There are further concepts, statistical in nature, which help in understanding the *degree* to which these likenesses and differences exist in and between students. Because not all teachers have had adequate training in tests and measurements and the possibility that most teachers may not have training in dealing with these concepts as they relate to the particular tests being introduced, time should be scheduled to help them become familiar with them. After giving and scoring the tests, all-faculty and grade-level discussion groups become a part of any well-planned testing program. Ideally, resource people such as a principal or supervisor who is well grounded in psychological tests and measurements or a guidance counselor, school psychologist or reading specialist should be on hand to service discussion groups.

Related Facts Needed in Interpretation of Test Results

As mentioned above, implicit in each individual student's profile of test scores are reasons for their being as they are. Reasons range from those of short-range cause and effect relationship such as accidental errors in marking the test to those of longer range, involving inherited or environmental factors. Unexpectedly low scores may reflect the real quality of neurological structure and be a valid indication of ability to make associations, draw inferences and thus learn. On the other hand, low scores may be the reflection of either a temporary or long-standing emotional tone which prevents the true functioning of the native learning capacity in an actual problem-solving situation. A stimulus from within, a personal problem, requires so much energy in trying for its solution that little of the student's "mental horsepower" remains for use in

the school situation. Which of these influenced the student's test results? Here we begin to deal with the real work of test interpretation. And no test is better than its interpretation.

What does this imply? Simply that the gathering of additional data, its analysis and application to each individual's test score profile is a sine qua non of standardized testing. It means that time must be provided to some one person or group or all teachers in which to gather this data, in order to pose an answer to such questions as: "What inheritable characteristics are likely to have influenced these results? What physical condition may have interfered with his best performance? What environmental factors have been conditioning this student to certain uses of language, certain habits of thinking, working, etc.? What have been the major influences in establishing his attitudes toward himself and his environment?"

But collection of data is not enough. Unless this information is available to the teacher, in her room, when she wants to use it, of what good is it? If a file containing such potentially useful information is kept locked in the school vault, the time and money spent in its collection can hardly be justified. Naturally, duplicates of certain information may be needed in a number of places throughout the school. Plans for a good program of standardized testing include a follow-through on each student by at least one teacher in liaison with whatever guidance, psychological or other specialized services may be available.

One of the important ways in which the classroom teacher plans to follow through in everyday work is by recognizing the level of academic work the student can successfully do at present and adjusting the difficulty and length of assignments either upward or downward. Another way is through group guidance. In this activity, plans are made for devoting a certain number of periods to helping students understand themselves and each other. The value of this type of follow-up will usually be in proportion to the amount of professional training the teacher has in this unique type of activity. The next logical step, teacher-pupil planning of units of study, growing out of the problems and developmental needs of the students, as shown by the tests, becomes a natural and meaningful educational process for both the students and their teacher.

In summary, standardized tests are most valuable when given in time to be used during the current school year. Secondly, the very name *standardized,* when applied to educational and psychological

tests, means that they must be given in a standardized manner, with meticulous adherence to manuals of instruction. Strongly implied is that teachers take part in a training process before giving a particular test to their classes. Thirdly, certain concepts of *intra-* and *inter-*personal differences and likenesses are needed to understand test scores. Fourthly, scores are not interpretable without related data on the particular student. Lastly, planning a program of standardized testing includes utilization of results as a guide to readjusting the curriculum to meet the individual differences and likenesses of students and continuous revision of the curriculum to meet the changing needs of the community. Thus, we have surveyed an educational continuum ranging from a standardized testing program to teaching with a purpose.

Standardized Tests of High School Subjects*

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THE following are good standardized tests at the high school level. All of them have been carefully constructed, have satisfactory reliabilities and are provided with norms derived from a sample of subjects sufficiently large for accurate interpretation. Except where indicated the time for giving these tests is 45-55 minutes. In general, there are two or more forms for each test and in some instances four or five forms. In the vast majority of cases the items seek to discover understandings, not merely rote memories. In this article *E. T. S.* stands for Educational Testing Service, Princeton, New Jersey, *World* stands for World Book Co., Yonkers, New York, and *Emporia* stands for Bureau of Educational Measurements, Kansas State Teachers College, Emporia, Kansas.

TESTS FOR ENGLISH

1. *Reading*
   a. Iowa Silent Reading Tests (advanced) for grade 10 and above. World
   b. Traxler Silent Reading Tests, Series II, Grades 10-12. Public School Publishing Co., Bloomington, Illinois
   c. Cooperative Reading Comprehension, Grades 7-12, E. T. S.

* A much more complete account of these tests is given in A. M. Jordan's *Measurement in Education*, New York, McGraw-Hill, 1952.

d. California Reading Tests, Grades 7-13, California Test Bureau, Los Angeles, California

2. *Language Structure and Usage*

a. Barrett-Ryan-Schrammel English Test. English Usage, Emporia

b. Cooperative English Test—Mechanics of Expression, E. T. S.

3. *Spelling*

a. Hudelson, Earl, F. L. Stetson, and Ella Woodyard: *Sixteen Spelling Scales.* Bureau of Publications, Teachers College, Columbia Univ., New York, 1921

b. Bixler, Harold E. and Ernest P. Simmons, Bixler High School Spelling Test. Atlanta, Georgia, Turner E. Smith Co., 1940

4. *Sentence Structure*

a. Cooperative English Test, Effectiveness of Expression, E. T. S.

5. *Organization of Written English*

a. Cooperative English Test—Effectiveness of Expression, E. T. S.

6. *English Composition*

a. The Hudelson Typical Composition Ability Scale, Public School Publishing Co., Bloomington, Illinois

7. *Vocabulary*

a. Inglis Tests of English Vocabulary. Boston, Ginn & Co.

b. Michigan Vocabulary Profile Test. Department of Psychology, University of Michigan, Ann Arbor, Michigan

8. *Appreciation of Literature*

a. M. G. Rigg, Measuring the Ability to Judge Poetry, Bureau of Educational Research and Service, University of Iowa, Iowa City

b. Cooperative Literary Comprehension and Appreciation Test. E. T. S.

c. Cooperative Literary Acquaintance Test. E. T. S.

d. Barrett-Ryan Literature Test. Emporia

SOCIAL SCIENCES

1. *History Tests*

a. Separate Cooperative Tests of America, Modern European, World History, E. T. S.

b. Separate tests in American, Modern European and World History. Emporia

c. Vannest Diagnostic Tests in Modern European History. Bureau of Cooperative Research, Indiana University, Bloomington

d. Cooperative Test in Ancient History, E. T. S.

2. *Civics and Government*

a. Cooperative Test in American Government, E. T. S.

b. Cooperative Test in Community Affairs, E. T. S.

c. American Council Civics and Government Test, World

d. Hill's Tests in (1) Civic Attitudes, (2) Civic Information, and (3) Civic Action are three separates tests (Grades 6-12). Public School Publishing Co., Bloomington, Ill.

3. *Economics*

a. Cooperative Economics Tests, E. T. S.

b. American Council Economic Test, World

c. Iowa—High School Economics, Bureau of Educational Research and Service, University of Iowa, Iowa City

4. *Sociology*

Black—Schrammel Sociology Test, Emporia

5. *Social Science*

a. Cooperative Social Studies Test for Grades 7, 8, and 9, E. T. S.

b. Cooperative Test of Social Studies Abilities. Form Q., E. T. S.

c. Wesley Test of Social Terms as well as a test of political terms. [Grades 6-16.] Charles Scribner's Sons, New York

FOREIGN LANGUAGES

1. *French*

a. Cooperative French Test. E. T. S.

b. American Council Alpha French Test. World

c. American Council Beta Test. World

d. American Council French Grammar Test. World

e. Columbia Research Bureau Aural French Test, grades 9-16. World

2. *Spanish*

a. Cooperative Spanish Tests, Elementary Form, and also Advanced Form, Revised Series, E. T. S.

b. Columbia Research Bureau Spanish Test. World

3. *German*

a. Cooperative German Test, Elementary Form. E. T. S.

b. American Council Alpha German Test. World

4. *Latin*

a. Cooperative Latin Test. Elementary or Advanced Form. E. T. S.

b. Kansas First Year Latin Test. Emporia

5. *Prognostic Tests in Languages*

a. Orleans-Soloman Latin Prognosis Test, World

b. Modern Language Prognosis Test by Luria and Orleans. World

MATHEMATICS

1. *General Mathematics*

Snader General Mathematics Test (1951). World

2. *Algebra*

a. Lankton First Year Algebra Test (1951). World

b. Cooperative Algebra Test, Two Tests
Elementary Algebra through quadratics, Revised Series
Intermediate Algebra Test, Quadratics and Beyond. E. T. S.

3. *Plane Geometry*

Shaycoft Plane Geometry Test (1931)—World

Cooperative Plane Geometry Test—E. T. S.

4. *Prognostic Tests*

a. in geometry

Iowa Plane Geometry Aptitude Test, Bureau of Educational Research and Service, State Univ. of Iowa, Iowa City

b. in algebra

Lee Test of Algebra Ability, Public School Publishing Company, Bloomington, Illinois

SCIENCE

1. *General Science*

a. Cooperative General Science Test, Forms P, Q, and X, Cooperative Testing Service, Princeton, New Jersey

b. Examination in General Science, High School Level (150-155 minutes). E. T. S.

2. *Biology*

a. Cooperative Biology Test. Forms P, Q, S, and X. E. T. S.

b. Application of Principles in Biological Science, Progressive Educational Association, Chicago, Illinois

3. *Chemistry*

a. Chemistry: Every Pupil Test, New Form each year, Ohio State Department of Education, Columbus, Ohio

b. Cooperative Chemistry Test, Revised Forms P, Q, S, and X. E. T. S.

4. *Physics*

a. Cooperative Physics Test, Forms P, Q, S, and X. E. T. S.

b. Physics: Every Pupil Test. New Form each year. Ohio State Department of Education, Columbus, Ohio

Instruments Which Will Be Useful to Homeroom Teachers in Counseling

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HOMEROOMS have been established in many high schools for the purpose of meeting the guidance needs of pupils. In some schools the traditional program of instruction in the regular classes has continued as usual on the apparent assumption that all guidance would be provided for in the homerooms. Other schools have recognized the need for more comprehensive guidance services which enlist the active cooperation and participation of every member of the school staff. In either situation the homeroom teachers have major guidance responsibilities.

One of the most important of these responsibilities is the collection of information about each student. In many cases the homeroom teacher is responsible for the maintenance of the cumulative record. Theoretically at least she is supposed to know more about each pupil in her homeroom than any other teacher. If such is the case, she should have information concerning achievements, interests, aptitudes and personal problems of each pupil. She should also have data about each pupil's health, home background, social status, and other information which is needed for effective guidance.

Unfortunately it is not possible for most homeroom teachers to collect all the desired information about their pupils. This is particularly true in those schools where the task is left up to the homeroom teacher almost entirely. In situations of this kind the homeroom teacher must consider practical limitations and concentrate upon information which she can collect easily and use most effectively.

Time is probably one of the most realistic obstacles. Some homeroom periods are only five to ten minutes each day. In situations of this kind, administrative rather than guidance functions occupy most, if not all, of the teacher's time. In other schools homeroom periods are scheduled once each week during an activity period. These periods are generally forty to fifty minutes in length and

hence make is possible to administer and use some tests as part of the homeroom program.

In selecting tests for use in the homeroom it is recognized that the homeroom teacher is not expected to establish and administer a comprehensive testing program. Such programs involve extensive study and planning by the entire school staff plus the use of regular class time for test administration. Since testing programs are discussed elsewhere in this issue, no further attention will be given in this article to testing in the areas of achievement, special aptitude and general ability.

Assuming that the homeroom teacher must proceed pretty much on her own as far as testing is concerned, what tests might she find practical and useful? In answering this question three inventories are suggested and described: The SRA Youth Inventory, the Mooney Problem Check Lists and the Kuder Preference Record, Vocational. The first two are designed basically for the purpose of identifying pupil problems. The latter is an interest inventory designed to identify interests in ten general areas.

SRA Youth Inventory, Science Research Associates, 57 West Grand Avenue, Chicago 10, Illinois.

The Examiner's Manual for the Youth Inventory contains the following statement: "The SRA Youth Inventory is a check list of 298 questions that have been designed as a tool to help teachers, counselors, and administrators to identify quickly the problems that young people say worry them most. . . . The Inventory was constructed under the auspices of the Purdue University Opinion Panel for Young People in cooperation of more than 100 high schools and over 15,000 teen-agers throughout the country. The questions were developed by asking hundreds of students to state anonymously in their own words what things bothered them most. The hundreds of essays revealed by the Purdue Panel were carefully analyzed by trained psychologists and checked against the results of previous youth surveys. All these ideas were sifted and the questions were prepared, using the terminology of young people themselves, to cover as wide a range of problems as possible."

The Inventory identifies problems in the following eight areas: (1) My School, (2) After High School, (3) About Myself, (4) Getting Along with Others, (5) My Home and Family, (6) Boy Meets Girl, (7) Health, and (8) Things in General. In addition a Basic Difficulty Key indicates which problems may be caused by

serious personality difficulties. The Inventory can be administered in about forty minutes and can be either hand or machine scored. Directions are simple. The student merely marks statements which express something that has been a problem to him. If the statement does not express one of his difficulties or it does not apply to him, he makes no mark and goes on to the next statement. Reusable booklets cost 49 cents each and self-scoring carbon answer pads cost $1.90 for a package of 25. A specimen set can be purchased for seventy-five cents.

While norms are given in the manual it is of doubtful value to make extensive comparisons between groups. If forty per cent of the students in a homeroom group say they wish they knew how to study better it is little comfort to know that 54 per cent of the norm group feel the same way. For this particular problem even 5 per cent may be too high regardless of whether it is above or below the national average. Homeroom teachers might well ignore the norms given in the manual and approach the Inventory results by asking, What can I do to help students in my homeroom with the problems which they have indicated? Through such an approach the interested teacher will find many ways to help her pupils through individual and group activities during the homeroom period.

The Mooney Problem Check Lists, The Psychological Cooperation, 522 Fifth Avenue, New York 18, New York.

The 1950 Manual for the Mooney Problem Check Lists states: "The Mooney Problem Check Lists were developed . . . to help students express their personal problems. Students read through the appropriate Problem Check List—Junior High School, Senior High School, or College Form—underline the problems which are of most concern, and write a summary in their own words.

"The Problem Check Lists is not a test. It does not measure the scope or intensity of student problems in such a way as to yield a test score. There is temptation to treat the number of items checked as a score, but such counts must be regarded only as a census count of each student's problems—limited by his *awareness* of his problems and his *willingness* to reveal them. The usefulness of the Problem Check Lists approach lies in its economy for appraising the major concerns of a group and for bringing into the open the problems of each student."

The manual gives five reasons for administering the Check Lists. These reasons as well as the statements quoted from the manual in

the preceding paragraph might be applied to the SRA Youth Inventory as well as to the Mooney Problem Check Lists. The pertinence of these reasons to the homeroom teacher need no elaboration.

I. To facilitate counseling interviews
II. To make group surveys leading to plans for individualized action
III. As a basis for homeroom, group guidance and orientation programs
IV. To increase teacher understanding in regular classroom teaching
V. To conduct research on the problems of youth

There are 330 items in the High School Form of the Check Lists. These are grouped so as to identify eleven problem areas: (1) Health & Physical Development, (2) Finances, Living Conditions and Employment, (3) Social and Recreational Activities, (4) Social-Psychological Relations, (5) Personal-Psychological Relations, (6) Courtship, Sex, and Marriage, (7) Home and Family, (8) Morals and Religion, (9) Adjustment to School Work, (10) The Future: Vocational and Educational, and (11) Curriculum and Teaching Procedures. The Junior High School Form contains 220 items and covers the following seven areas: (1) Health and Physical Development, (2) School, (3) Home and Family, (4) Money, Work and Future, (5) Boy and Girl Relations, (6) Relations to People in General, (7) Self-centered Concerns.

The Check Lists are self-administering. All directions are given on the cover. Most students finish the checking in 35 minutes and practically all of the group finish in 50 minutes. The Check Lists are sold in packages of 25 for $1.65. Specimen sets can be purchased for ninety cents. Reusable booklets for the Separate Answer Sheet Edition cost $2.40 for packages of 25. Separate answer sheets are sold in packages of 50 at $1.90 per package.

The Kuder Preference Record, Vocational, Science Research Associates, 157 West Grand Avenue, Chicago 10, Illinois.

The Kuder Preference Record has become one of the most useful and popular inventories particularly at the secondary level. While there are no time limits the Inventory can be administered in one class period. Separate answer pads for hand scoring are designed so that each student can score his own test and make his own pro-

file by following the printed directions in the profile sheet. The profile gives scores in ten general interest areas (0) Outdoor, (1) Mechanical, (2) Computational, (3) Scientific, (4) Persuasive, (5) Artistic, (6) Literary, (7) Musical, (8) Social Service, and (9) Clinical. Reusable record booklets with self-scoring pads are available at forty-nine cents each. Extra scoring pads cost $2.15 for a package of 25. A specimen set may be purchased for seventy-five cents.

The Manual contains a table which classifies many occupations according to occupational interests. Under each of the ten interest areas the manual suggests occupations which might be considered by those where interests are high in a particular area. The occupations are listed according to the titles and code numbers which are used in the Dictionary of Occupational Titles. As the manual states these occupations are suggestive only and should not be confused with aptitude for a given vocation. Homeroom teachers should constantly remember this particular point. Pupils often erroneously assume that a high interest score means they have the ability to succeed in given courses of study or in given occupations. Careful explanation to pupils individually and in groups will help to alleviate this difficulty.

While these three inventories have been suggested in this article it should be remembered that they represent only a few of the standardized instruments which may be successfully used by homeroom teachers. Likewise, it should be remembered that any test or inventory may be dangerous and sometimes harmful to the pupil unless it is evaluated and interpreted after due consideration has been given to other pertinent facts about the individual. Information about home and family, health, achievement, aptitudes, abilities and other significant facts must be studied along with test scores if some of the common misuses of tests are to be avoided. Cumulative records should be examined. Informal conferences with parents, other teachers, and students often reveal important bits of information. Locally made questionnaires can be effectively and easily used by homeroom teachers to supplement test data and other information. These simple techniques can be used to collect information which is most helpful in the intelligent use and interpretation of test results.

In summary, the SRA Youth Inventory or the Mooney Problem Check Lists may be used effectively by homeroom teachers as a

means of identifying student problems. With such information homeroom teachers are in a better position to help pupils both through individual counseling and group methods. The Kuder Preference Record, Vocational, provides a convenient and effective method of identifying interests which may be useful in educational and vocational planning.

Evaluation in Physical Education

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WHERE ARE WE GOING? WHAT ARE WE DOING?

THESE two questions must be faced honestly by the teacher of physical education as well as by all members of the teaching profession. The answer to the first question establishes the objectives of instruction. Hence, the direction in which a program of physical education is pointed is clearly indicated. For example, is physical fitness to be the primary concern of physical education? Some members of the profession will answer in the affirmative, while still others insist that skill in and knowledge of sports should be accorded first consideration. Another sizeable group states with clarity that the primary objective of physical education in a democratic society must be social efficiency and character training.

Each teacher must decide where he is going with the program. "Whistle tooters" and "ball thrower outers," as we have often been branded may be justified epithets because our programs have lacked clearly defined objectives, and hence have been without direction. Where are you going with your program?

Once objectives are established and ranked in order of importance, we are confronted with the second question, namely: what are we doing? Has there ever been a teacher who has not asked himself this question over and over again? Unfortunately the answer is not found in the asking of the question. One must formulate instruments and perfect techniques for measuring quantitative and qualitative results of the program. As teachers of physical education we are not without help in this task. Research has supplied in some measure instruments and techniques that have varying

degrees of reliability, objectivity and validity. The remainder of this paper will be devoted to a presentation of selected tests in physical education that seem to the writer to be a practical method of securing objective data for determining, to some degree, what is being accomplished by the physical education program in the public schools of the state and region.

I. PHYSICAL FITNESS TESTS

Physical fitness, as used here, refers to such factors as strength, speed, agility, endurance, power and balance. The primary purpose is to determine the fitness of the body for strenuous work.[1]

During World War II the United States Office of Education in cooperation with various branches of the armed services formulated the Victory Corps Standards and tests of physical fitness.[2] The test items for boys were grouped in the following categories:

Category I (Arm and Shoulder Girdle)

1. Push ups
2. Pull ups
3. Dips and parallel bars*
4. 15 foot rope climb
5. Bar vault

Category II (Abdomen and Back)

6. Set ups
7. Hanging half lever
8. Leg lift
9. Forward bend
10. Back twist

Category III (Legs)

11. Potato race
12. Jump and reach
13. Standing broad jump
14. Running broad jump
15. Running high jump
16. 100-yard dash
17. 440-yard run*
18. 880-yard run*

* (These activities should not be permitted below the tenth grade or in classes E and F.)

Boys are classified according to age, height, and weight, using the Cozens' classification procedure. In using the tests, the instructor chooses a ten item battery with at least three test items coming from each category. The first item in each category must always

[1] John F. Bovard, Frederick W. Cozens and E. Patricia Hagman, *Tests and Measurements in Physical Education* (Philadelphia and London: W. B. Sanders Company, 1948), p. 171.

[2] U.S. Office of Education, Federal Security Agency, *Physical Fitness Through Physical Education for the Victory Corps.* Pamphlet No. 2. Washington: U.S. Government Printing Office, 1942.

be included. Standards have been developed for Categories I and III but are not developed for Category II.

The Victory Corps program also presented five tests for girls: jump and reach, soccer throw in, potato race, 20-yard and 40-yard free style swim. Scoring tables and test directions are to be found in the Victory Corps Manual.

The state of Indiana has developed a fitness test for high school boys and girls.[3] The items are: straddle chins, squat thrusts, push ups and vertical jump. A fitness score is calculated by multiplying the sum of the scale scores for the first three items by the scale score of the vertical jump. Norms have been established for boys based upon the McCloy Classification Index and height weight class divisions for girls.

II. SPORT SKILL TESTS

When skill in sports is the first objective of physical education, what tests are available for measuring these sport skills? Touch football, basketball, volleyball, and softball being the most popular activities in the North Carolina secondary school programs for boys, the following tests are suggested.

Borleske Touch Football Test[4]

This test consists of five items: forward pass for distance, catching forward pass, punting for distance, 50-yard dash carrying a football, and zone pass defense. Although Borleske worked only with college men in developing his test, it can be used for high school students. However, there are no standards available for high school boys.

Knox Basketball Test[5]

Knox uses a battery of four items in his test: speed dribble, wall bounce, dribble shot, and "penny-cup." Each item is scored according to the number of seconds required to complete the item, and the final score is determined by adding the times made on the four events. No norms are established.

Directions for administering the test items are:

1. Speed dribble test: Four chairs are placed in a straight line so that the

[3] State of Indiana, *Physical Fitness Manual for High School Boys*, Bulletin No. 136. Department of Public Instruction, Indiana, 1944.
———, *Physical Fitness Manual for High School Girls*, Bulletin No. 137 (Revised) Department of Public Instruction, Indiana, 1944.

[4] Frederick W. Cozens, "Ninth Annual Report of Committee on Curriculum Research of the College Physical Educational Association: Part III," *Research Quarterly*, Vol. VIII, No. 2 (May, 1937).

[5] Robert D. Knox, "Basketball Ability Tests," *Scholastic Coach*, Vol. 17, No. 3 (March, 1947) p. 45.

first one in 20 feet from the starting line and the others are 15 feet apart. The subject dribbles around the chairs (following a zig-zag pattern).

2. Wall-bounce test: The subject stands with his toes behind a line five feet from a wall. The object of the test is to ascertain how long it will take him to chest pass (no batting) the ball against the wall and catch it 15 times.

3. Dribble shoot test: From a starting line on the right side of the court 65 feet from the basket arrange three chairs directly in line with the basket, so spaced as to divide the distance into four equal segments. The subject dribbles around the obstacles, shoots until he makes a shot, and dribbles back around the obstacles to the starting line.

4. Penny cup test: A 20 foot course is set up with a "signal line" eight feet from the start. Three tin cups painted blue, white and red respectively, are placed five feet apart on the finish line (20 foot mark). The subject stands behind the starting line with his back to the cups and with a penny in his hand; at the signal "go" he pivots and races toward the cups; as he crosses the signal line (8 foot line) the tester calls out one of the cup colors; the subject must drop his penny into the cup so designated. The test is repeated four times, the total elapsed time representing the score.[6]

For girls' basketball Scott and French[7] suggest a two-item test. Half minute shooting in which a player stands in any position near the basket and on the "go" signal shoots baskets for thirty seconds. The score is the number of baskets made. Two trials are allowed. The second item is passing using the Edgren ball handling technique. A detailed description of this item is given on page 81 of the test listed below.

Volleyball

Scott and French[8] have also developed a two-item test in volleyball for girls. Similar items can be used for boys. Item one is repeated volleys in which a player standing behind a three-foot line tosses the ball to the wall with an underhand movement. When it returns, he volleys it repeatedly against the wall above the net line for 15 seconds. The score is the number of times the ball is clearly batted (not tossed) from behind the three-foot line on the floor to the wall above or on the net line. Ten trials are permitted and the sum of the best five trials out of ten is the final score.

The second item is a serve. The player stands in the proper serving area on the court opposite the target and is given ten trials to serve the ball into the target in the court across the net. Any legal serve is permitted. The final score is the sum of the scores

[6] *Ibid.*, p. 45.
[7] M. Gladys Scott and Ester French, *Evaluation in Physical Education*, The C. V. Mosby Company (St. Louis: 1950), pp. 79-82.
[8] *Ibid.*, p. 146.

made on the ten trials. T-scores are available for secondary school girls in each of these items.

Softball

In measuring a student's skill in softball the following test items are suggested: throw for distance, throw for accuracy, base running for time, fielding, and hitting. T-scores for certain of these skills have been developed for girls by Scott and French.[9] There is need for the calculation of such scores for secondary school boys.

III. SOCIAL EFFICIENCY AND CHARACTER TRAINING

In this area applied research has little to offer us in terms of specific tests and techniques. McCloy[10] and Blanchard[11] with their behavior rating scales have indicated one technique for the measurement of social traits in physical education.

In this area the profession needs to devote more time in developing better instruments for measuring objectively the outcomes which we attribute to participation in physical education activities.

In summarizing this paper the writer would like to define the process of evaluation as applied to physical education. Evaluation in physical education involves three steps. Step one is the defining of objectives in order to determine the direction of a physical education program. Step two is the collection of data necessary to appraise the extent to which objectives have been achieved. Tests, rating scales, and other techniques help provide these data.

Step three is the judging of the educational significance, in light of objective sought, of the achievements made by physical education programs.

The process of evaluation sincerely implemented by the teacher of physical education should answer in a large measure the questions:

Where are we going? What are we doing?

[9] *Ibid.*, p. 119.
[10] C. H. McCloy, "Character Building in Physical Education," *Research Quarterly*, Vol. I, No. 3 (October, 1930).
[11] B. E. Blanchard, A Behavior Frequency Rating Scale for Measurement of Character and Personality in Physical Education Classroom Situations," *Research Quarterly*, Vol. VII, No. 2 (May, 1936).

Films Dealing With Techniques of Testing

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Motion picture photography has proven itself particularly valuable in recording the results of tests and experiments as well as a method for illustrating techniques of testing.

The films selected give examples of testing techniques as well as the results of experimental studies which have been recorded. The subjects of all the films are not secondary level, but the concepts and techniques, in most cases, are documentary evidence of an experiment which illustrates basic techniques.

* TESTING INTELLIGENCE WITH THE STANFORD-BINET, 18 minutes, Black and White, Sound. Indiana University, Audio-Visual center, Bloomington, Indiana.

Produced jointly by the Educational Film Library Association and Indiana University, this film gives a brief summary of the types of items included and the method of administration employed. It shows the reactions of four children who are taking the test (unrehearsed), and, because of the varied IQ's, it allows excellent comparisons. W. S. Verplanck, Indiana University, was educational consultant.

* MECHANICAL APTITUDES, 10 minutes, Black and White, Sound. Coronet Films, Inc., Coronet Building, Chicago, Illinois.

Methods of testing mechanical interests and abilities, and ways of increasing mechanical abilities are shown in this film. With Frank S. Endicott of Northwestern University as educational consultant, the film is centered around a high school boy whose counselor is attempting to advise him on the choice of electives, by first finding out about his interests and abilities.

TESTING THE I. Q., 15 minutes, Black and White, Silent. International Film Bureau, 57 East Jackson Blvd., Chicago 4, Ill.

Produced at Columbia University by Professors Gilbert and Garrett, this film demonstrates the administration of the re-

vised Stanford-Binet Intelligence Test and calculation of the I. Q.

MOTOR APTITUDE TESTS AND ASSEMBLY WORK, 22 minutes, Black and White, Silent. Pennsylvania State College, Psychological Cinema Register, State College, Pennsylvania.

Produced by Adelbert Ford, the film begins with a comparison of a subject of unusual motor ability and a subject of average capacity. The metal-stylus tapping test, the peg-board test, the O'Connor Wiggley-block test, the dynamometer strength test, and the Whipple steadiness test are all shown. After the test series is completed, the two men are shown on an assembly line doing work in which motor ability is important.

DO BETTER ON YOUR EXAMINATIONS, 10 minutes, Black and White, Sound. Coronet Films, Coronet Bldg., Chicago 1, Illinois.

Various types of examinations for students are shown; and four basic rules that students can follow to do better on their examinations are given. Henry B. McDaniel, of Stanford University, was educational consultant.

* COUNSELING—ITS TOOLS AND TECHNIQUES, 22 minutes, Black and White, Sound. Carl F. Mahnke Productions, 215 East Third Street, Des Moines, Iowa.

The tools and techniques used in adequate counseling are explained in this film produced by the Vocational Guidance Films, with the script prepared by members of the staff of the Institution of Counseling, Testing and Guidance, Michigan State College. Included are tests, interviewing, questionnaires, and the use of films.

USING THE SCIENTIFIC METHOD, 11 minutes, Black and White, Sound. Coronet Films, Coronet Building, Chicago, Illinois.

With Walter A. Thurber, New York State Teachers College at Cortland, as educational consultant, this is an explanation of the use of the scientific method in approaching an everyday problem. The various steps in the procedure are shown—definition of the problem, collection of information, formation of a hypothesis, experimental testing of the hypothesis, and the retesting of the results obtained.

* EXPERIMENTAL STUDIES IN SOCIAL CLIMATES OF GROUPS, 30 minutes, Black and White, Sound. Iowa State University, Bureau of Visual Instruction, Extension Division, Iowa City, Iowa.

The behavior of groups of boys organized in clubs run on difference principles is recorded in this film produced by Lewin, White & Lippitt and the Department of Visual Instruction, University of Iowa. Graphs and charts give statistics as to group actions and reactions when clubs are changed from one type to another, e.g., from democratic principles to autocratic principles, etc.

* Available through the Bureau of Visual Education, University of North Carolina, Chapel Hill, N. C.

Editorial Note

Due to lack of space, the bibliography on testing which was planned for this issue will appear in the March issue.

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